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NFPA AN ECONOMICS BULLETIN OF THE FOREST PRODUCTS INDUSTRY

# ECONOMICS MONTHLY

Volume III Number 1 January, 1987

**MONTHLY STATISTICAL HIGHLIGHTS**

Imports of softwood lumber from Canada fell by 21.4 percent in November, bringing the volume of Canadian imports through November to 13,377.6 million board feet.

Canadian market share through November was 30.8 percent, compared to 33.5 percent a year earlier.

The volume of treated wood products increased by one and a half times between 1978 and 1984, according to a report prepared for the American Wood Preservers Institute.

The Appalachian hardwood lumber region reported dramatic increases in production, shipments and new orders in November. U.S. hardwood lumber production in November was 78 percent higher than November, 1985.

## ECONOMY WATCH -- HOUSING STARTS AS EXPECTED; GNP DOWN; IMPORTS DOWN

Housing starts finished the year at 1.806 million units, of which 65 percent were in single-family dwellings. This was fairly consistent with earlier forecasts for the year, and only slightly lower than the level projected by NFPA. Consumption of softwood lumber through November was running over 6 percent ahead of 1985, indicating that the year set another historical record.

The Commerce Department, however, reported economic growth during the fourth quarter to be 1.7 percent, and a scant 2.2 percent for the year. Real GNP growth, therefore, was the lowest since the recession year of 1982. New housing helped to maintain what modest growth there was in the economy last year. New housing accounts for about 5 percent of the GNP, and residential investment grew over 11 percent last year.

Imports for softwood lumber from Canada plummeted again in November, after falling in October. Imports of Canadian softwood lumber amounted to 761 million board feet for the month, down 21.4 percent from October. The decline brought the level of imports for the first 11 months below a year earlier, the first decline in the volume of imports since the 1982 recession. The year is likely to finish with a decline in Canadian market share for the first time since 1979, down to less than 31 percent. The drop-off of imports can be explained by two factors: strikes in parts of Canada which were not settled until late in the year, and the imposition of a countervailing duty under a preliminary Department of Commerce decision issued in mid-October. An agreement was reached between the two countries on December 30, resulting in a 15 percent export tax on the Canadian side of the border for softwood lumber bound for the United States. U.S. producers are reporting substantial increases in new orders since the first of the year, in part due to the new trade situation.

Meanwhile, the dollar is falling rapidly *vis a vis* the West German mark and Japanese Yen, infusing the economy with some additional uncertainty. Most analysts have welcomed a weakening of the dollar as a prelude to a reduced trade deficit. But too precipitous a drop could set off some less-than-desireable impacts. The down side could be higher interest rates, higher inflation, and slower growth in countries that are major customers for U.S. products. Many economists believe there remains room for the dollar to fall without these dangers.

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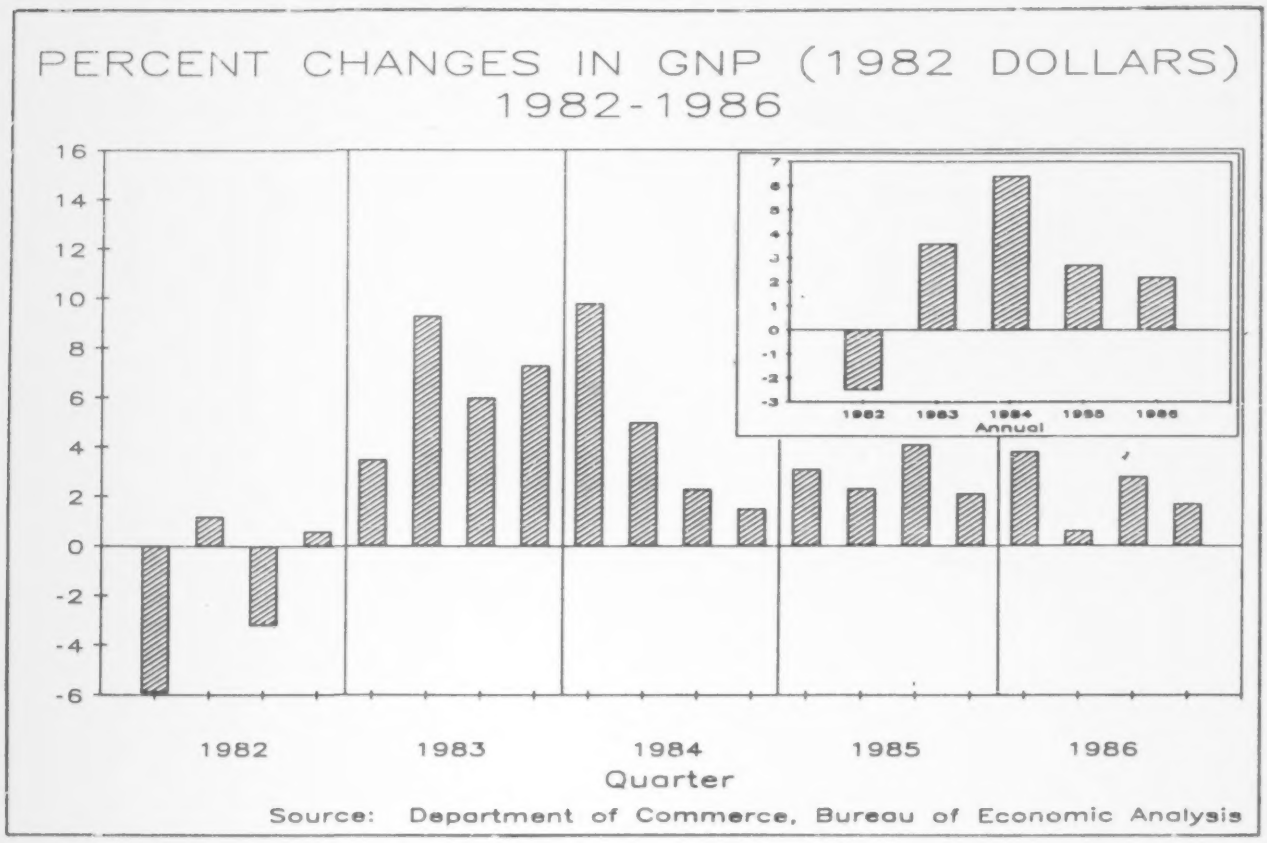
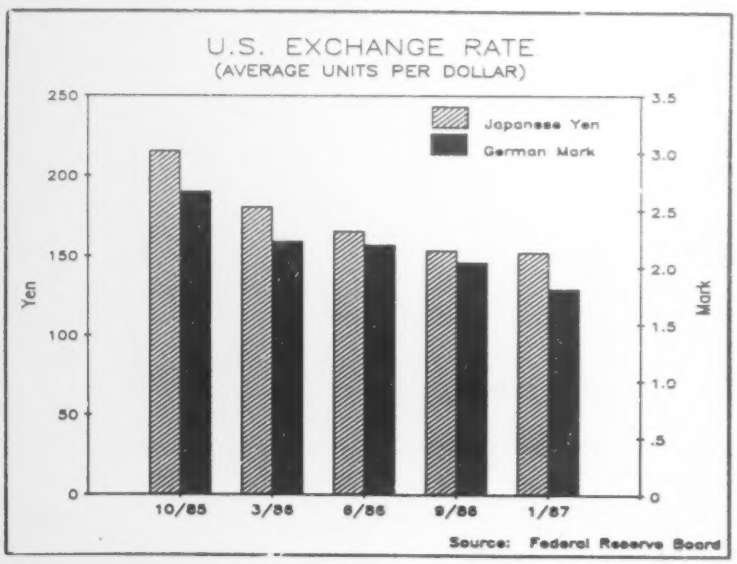



**Figure 1:** Preliminary statistics show that GNP grew at a 2.2 percent rate during 1986; 1.7 percent during the fourth quarter.

**Figure 2:** The dollar is falling against two major currencies.




## MARKET FOCUS -- WOOD PALLETS AND CONTAINERS UNDER ATTACK

Although the major markets for wood products are construction-related, wood is also used as a material in manufacturing and shipping. This is a particularly important market segment for hardwood lumber, and is growing in significance for softwood plywood. Specifically, pallets and containers made of wood are commonly used for warehousing and shipping manufactured goods to their destinations. The wood pallet and container industry represents the largest consumer of hardwood lumber.

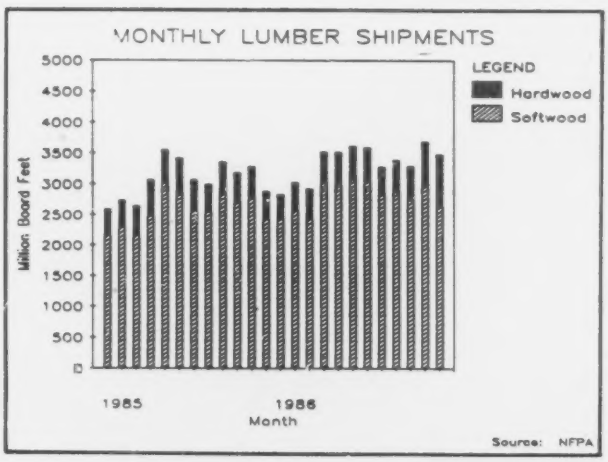
# ECONOMICS MONTHLY

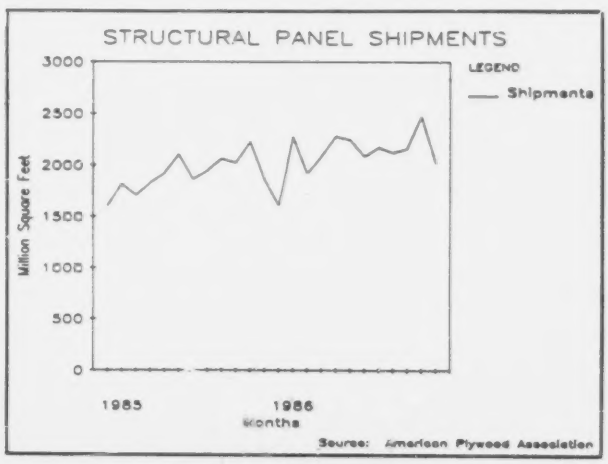
## MONTHLY STATISTICAL SUPPLEMENT

**Issued: January, 1987**

## ESTIMATED INDUSTRY TOTALS BY PRODUCING REGION

| | NOVEMBER 1986 | | | NOVEMBER 30, 1986 | |
|---|---|---|---|---|---|
| | Production | Shipments | Orders Received | Unfilled Orders | Gross Stocks |
| SOFTWOOD LUMBER | | (Million Board Feet) | | | |
| Southern Pine Region | 846 | 837 | 778 | 721 | 1,947 |
| Douglas Fir Region | 723 | 691 | 694 | 650 | 1,013 |
| Western Pine Region | 841 | 824 | 812 | 519 | 1,369 |
| California Redwood Region | 157 | 155 | 173 | 130 | 398 |
| Other Softwoods | 131 | 128 | 126 | 261 | 311 |
| TOTAL SOFTWOODS | 2,698 | 2,635 | 2,583 | 2,281 | 5,038 |
| % Change - October 1986 | -15.8% | -14.0% | -21.3% | -2.2% | 1.3% |
| % Change - November 1985 | 9.7% | 8.2% | 5.8% | 15.5% | 3.1% |
| HARDWOOD LUMBER | | | | | |
| Southern Hardwood Region | 210 | 220 | 244 | 307 | 849 |
| Appalachian Hardwood Reg. | 257 | 275 | 301 | * | * |
| Other Hardwoods | 331 | 350 | 385 | 297 | 828 |
| TOTAL HARDWOODS | 798 | 845 | 930 | 604 | 1,677 |
| % Change - October 1986 | 20.9% | 23.4% | 31.2% | 16.4% | -2.7% |
| % Change - November 1985 | 78.1% | 89.5% | 99.6% | 46.2% | -3.0% |
| TOTAL LUMBER | 3,496 | 3,480 | 3,513 | 2,885 | 6,715 |
| % Change - October 1986 | -9.5% | -7.2% | -11.9% | 1.2% | 0.2% |
| % Change - November 1985 | 20.2% | 20.8% | 20.8% | 20.8% | 1.5% |
| * Included in Other Hardwoods | | | | | |
| FLOORING | | (Thousand Feet) | | | |
| Oak Flooring (Bd. Ft.) | NA | 11,189 | NA | 7,908 | 5,534 |
| Maple Flooring (Sq. Ft.) | 776 | 620 | 705 | 3,517 | 1,668 |
| STRUCTURAL PANELS (Sq. Ft.) | 2,021,065 | 1,963,532 | 1,713,274 | 634,359 | 442,000 |
| % Change - October 1986 | -16.8% | -20.7% | -26.6% | -28.3% | 14.8% |
| % Change - November 1985 | 6.4% | 5.7% | 1.2% | 9.5% | 1.8% |

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## YEAR-TO-DATE INDICATORS

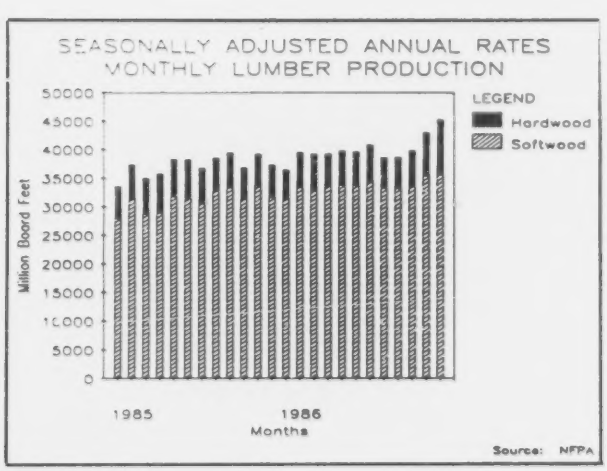
| | PRODUCTION | | SHIPMENTS | | ORDERS RECEIVED | |
|---|---|---|---|---|---|---|
| | Latest Period Available | % Change | Latest Period Available | % Change | Latest Period Available | % Change |
| | 11 mos.'86 | 11 mos.'85 | 11 mos.'86 | 11 mos.'85 | 11 mos.'86 | 11 mos.'85 |
| | (Million Board Feet) | | | | | |
| TOTAL LUMBER | 38,022 | 9.7% | 37,791 | 10.5% | 38,301 | 11.6% |
| TOTAL SOFTWOOD | 31,955 | 10.1% | 31,682 | 10.3% | 31,981 | 11.0% |
| TOTAL HARDWOOD | 6,067 | 7.6% | 6,109 | 11.7% | 6,320 | 15.0% |
| | (Million Square Feet) | | | | | |
| STRUCTURAL PANELS | 23,895 | 11.2% | 23,785 | 11.4% | 23,485 | 11.2% |

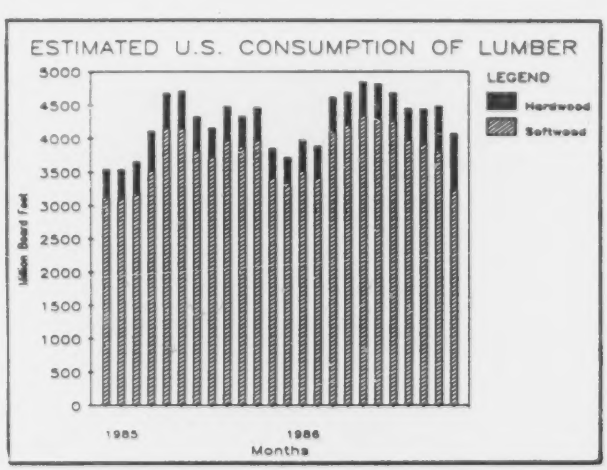
## SEASONALLY ADJUSTED ANNUAL RATES

| | PRODUCTION | | | SHIPMENTS | | |
|---|---|---|---|---|---|---|
| | | ---% Change From-- | | | ---% Change From-- | |
| LUMBER REGION | Nov. '86 | Oct. '86 | Nov. '85 | Nov. '86 | Oct. '86 | Nov. '85 |
| | (Million Board Feet) | | | (Million Board Feet) | | |
| Southern Pine | 11,271 | -2.6% | 9.1% | 10,961 | 0.8% | 4.7% |
| Douglas Fir | 9,618 | -2.7% | 18.3% | 8,950 | -1.6% | 10.0% |
| Western Pine | 10,774 | 0.2% | 8.9% | 9,813 | -2.9% | -0.4% |
| Calif. Redwood | 2,260 | 16.4% | 29.6% | 2,140 | 12.9% | 20.9% |
| Other Softwoods | 1,726 | -0.9% | 12.9% | 1,611 | 0.8% | 5.7% |
| TOTAL SOFTWOODS | 35,648 | -0.7% | 12.7% | 33,476 | -0.3% | 5.4% |
| TOTAL HARDWOODS | 9,685 | 26.9% | 69.4% | 10,102 | 22.5% | 80.6% |
| TOTAL LUMBER | 45,334 | 4.2% | 21.4% | 43,578 | 4.2% | 16.7% |

## DOMESTIC LUMBER CONSUMPTION

| | CURRENT | | | YEAR-TO-DATE | |
|---|---|---|---|---|---|
| | Latest Month Available | ----% Change From---- | | Latest Period Available | % Change From |
| | Nov. '86 | Oct. '86 | Nov. '85 | 11 mos.'86 | 11 mos.'85 |
| | (Million Board Feet) | | | | |
| Total Consumption | 4,070 | -10.5% | 5.6% | 49,461 | 6.7% |
| Softwood Consumption | 3,237 | -16.5% | -5.2% | 43,487 | 6.3% |
| Hardwood Consumption | 833 | 24.6% | 89.8% | 5,974 | 9.9% |

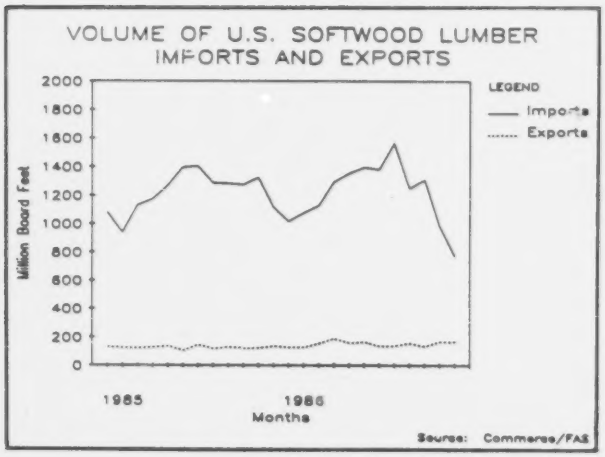


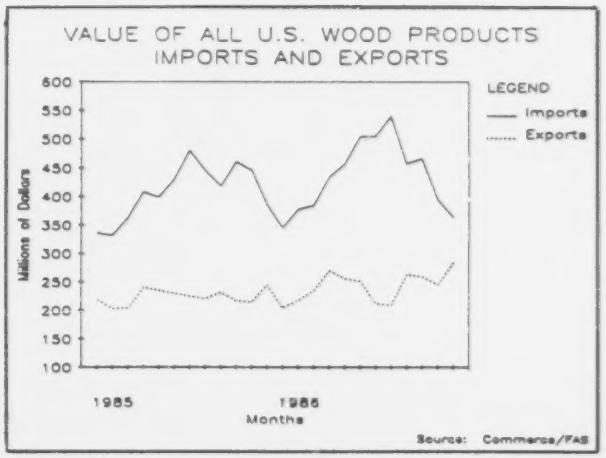



## INTERNATIONAL TRADE STATISTICS

| | | VOLUME | | | | VALUE | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Nov. '86 | 11 mo. 1986 | % Change From Oct. '86 | % Change From 11 mo. 1985 | Nov. '86 | 11 mo. 1986 | % Change From Oct. '86 | % Change From 11 mo. 1985 |
| EXPORTS | | | | | | | | | |
| SOFTWOOD LUMBER | MMBF | 167.9 | 1,693.1 | -0.5% | 21.9% | 61,640 | 575,514 | 4.5% | 26.3% |
| To Canada | MMBF | 26.2 | 334.6 | -5.6% | 19.5% | 7,094 | 83,717 | -1.9% | 19.8% |
| SOFTWOOD LOGS | MMBF | 328.9 | 3,112.8 | 31.2% | -10.0% | 105,288 | 1,007,949 | 30.1% | -7.2% |
| SOFTWOOD PLYWOOD | MMSF 3/8" | 67.9 | 504.5 | 145.0% | 82.7% | 15,411 | 110,559 | 134.6% | 69.6% |
| HARDWOOD LUMBER | MMBF | 44.7 | 459.3 | -0.6% | 24.6% | 31,173 | 311,859 | 0.0% | 36.2% |
| HARDWOOD LOGS | MMBF | 41.7 | 129.6 | 338.0% | 26.4% | 8,326 | 88,409 | -3.3% | 7.8% |
| HARDWOOD VENEER | MMSFsurf | 91.2 | 903.6 | 5.3% | 20.8% | 8,263 | 73,771 | 5.4% | 26.1% |
| PARTICLEBOARD | MMSF 3/4" | 17.1 | 153.7 | -6.2% | 41.8% | 3,294 | 30,647 | -6.2% | 41.6% |
| ALL OTHER | | NA | NA | NA | NA | 49,343 | 489,655 | 5.2% | 9.8% |
| TOTAL U.S. EXPORTS | | NA | NA | NA | NA | 283,687 | 2,698,517 | 15.7% | 9.7% |
| IMPORTS | | | | | | | | | |
| SOFTWOOD LUMBER | MMBF | 770.2 | 13,498.6 | -21.6% | -0.7% | 138,481 | 2,823,791 | -36.5% | 4.7% |
| From Canada | MMBF | 761.2 | 13,377.6 | -21.4% | -1.0% | 136,336 | 2,795,867 | -36.8% | 4.4% |
| SOFTWOOD LOGS | MMBF | 9.6 | 51.8 | 4501.0% | -25.3% | 2,451 | 7,175 | 6184.6% | -56.3% |
| SOFTWOOD PLYWOOD | MMSF 3/8" | 15.2 | 123.9 | 74.8% | 54.3% | 3,950 | 32,356 | 69.0% | 63.2% |
| HARDWOOD LUMBER | MMBF | 31.9 | 321.1 | 10.1% | -5.7% | 15,663 | 155,478 | 10.6% | -7.8% |
| HARDWOOD LOGS | MMBF | 0.6 | 23.6 | -65.9% | -6.6% | 248 | 3,899 | 20.4% | 15.0% |
| HARDWOOD VENEER | MMSFsurf | 160.6 | 1,475.4 | 45.5% | 13.2% | 11,549 | 104,304 | 32.4% | 10.7% |
| HARDWOOD PLYWOOD | MMSFsurf | 442.8 | 3,567.0 | 88.2% | 8.4% | 57,243 | 451,372 | 73.8% | 10.3% |
| HARDBOARD | MMSF 1/8" | 83.5 | 803.6 | 85.1% | 12.5% | 5,123 | 52,513 | 43.5% | 9.7% |
| PARTICLEBOARD | MSF 3/4" | 82.3 | 1,054.0 | -3.7% | 12.4% | 11,782 | 128,995 | -3.3% | -1.0% |
| ALL OTHER | | NA | NA | NA | NA | 116,901 | 1,117,907 | 14.1% | 14.6% |
| TOTAL U.S. IMPORTS | | NA | NA | NA | NA | 363,696 | 4,880,909 | -7.9% | 6.9% |

Note: Volume total is not possible because the products are in different units of measure.
Note: Particleboard imports include OSB/Waferboard.



## VALUE OF NEW CONSTRUCTION

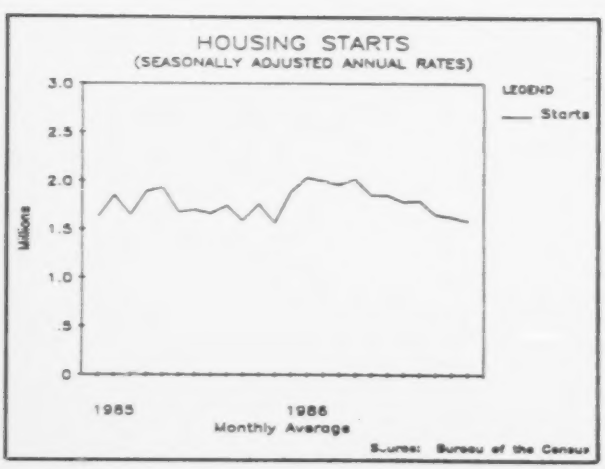
| | CURRENT | | | YEAR-TO-DATE | |
|---|---|---|---|---|---|
| | Latest Month Available | % Change From | | Latest Period Available | % Change From |
| | Nov. '86 | Oct. '86 | Nov. '85 | 11 mo. '86 | 11 mo. '85 |
| | (Billions of Dollars) | | | | |
| VALUE OF ALL NEW CONSTRUCTION PUT-IN-PLACE | 32.5 | -7.7% | 9.2% | 347.5 | 10.0% |
| Private | 26.5 | -6.0% | 8.9% | 281.5 | 9.3% |
| Residential | 15.4 | -6.7% | 19.9% | 160.8 | 17.2% |
| Nonresidential & Other | 11.1 | -5.1% | -5.9% | 120.7 | 0.2% |
| Public | 6.0 | -14.3% | 10.6% | 66.0 | 13.4% |

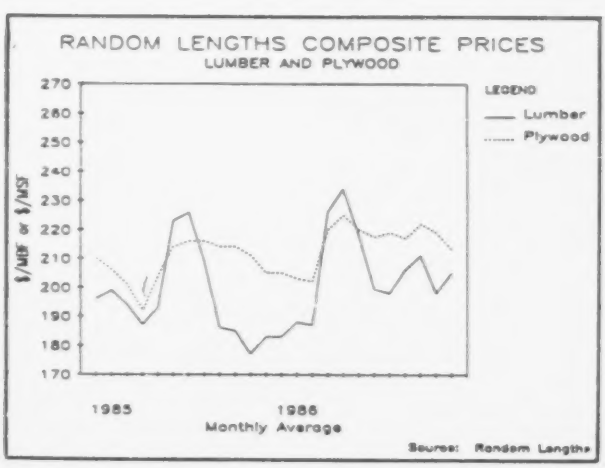
## HOUSING STARTS

| | Nov. '86 | Oct. '86 | Nov. '85 | 11 mo. '86 | 11 mo. '85 |
|---|---|---|---|---|---|
| | (Thousands of Units) | | | | |
| NEW HOUSING UNITS STARTED | | | | | |
| Total Private & Public | 115.9 | -25.2% | -6.6% | 1,693.0 | 4.3% |
| New Private Starts | 115.8 | -25.2% | -6.7% | 1,691.5 | 4.3% |
| Seas. Adj. Annual Rate | 1585 | -2.6% | -4.2% | | |
| One-Family Housing Starts | 77.4 | -23.3% | 5.4% | 1,106.9 | 10.0% |
| Proportion of Total | 66.8% | | | 65.4% | |
| | (Number of Units) | | | | |
| SHIPMENTS OF MOBILE HOMES | 17,200 | -25.5% | -17.7% | 228,600 | -14.3% |

## INDUSTRY EMPLOYMENT

| | Nov. '86 | % Change From | |
|---|---|---|---|
| | | Oct. '86 | Nov. '85 |
| | (Thousands of Employees) | | |
| TOTAL EMPLOYMENT (Seasonally Adj.) | | | |
| All Industries | 101,065 | 0.2% | 2.3% |
| All Manufacturing Industries | 19,159 | 0.2% | -1.1% |
| Lumber and Wood Products | 742 | 0.7% | 4.2% |
| Furniture and Fixtures | 500 | 0.0% | 0.6% |



There is an old story that Henry Ford required his suppliers to meet certain specifications for wood shipping containers in the early years of car manufacturing. To reduce costs, they were taken apart and the wood was used for floor boards. And while wood pallets and boxes made of wood have been around for a long time, new product developments are adding to their uses and flexibility. The American Plywood Association has developed a versatile wood container marketed as "Big Bin," an alternative to steel drums.

**Background**

In 1984, the value of shipments of the wood pallet and container industry amounted to $2 billion. It is not big business in the traditional sense, but there are some 3,000 producers all over the country that specialize in this market niche. In many cases, it is the mainstay of a local business. Most pallet producers ship to customers located within a 100 mile radius of their plants.

Estimates vary as to the volume of hardwood lumber which is consumed for pallets and containers, but they range to as much as 60 percent of all hardwood lumber produced in the United States. A study conducted by Southern Illinois University yielded some figures on the wood pallet and container industry for 1985. According to the study, there were approximately 2,340 pallet firms in the United States in 1985 with the heaviest concentration of firms (30 percent) located in the East North Central region consisting of Michigan, Wisconsin, Ohio and Indiana. The location of pallet firms appears to overlap the nation's industrial belt. In 1985, the industry employed 44,000 workers, with an average of 19 employees per firm. Total pallet production for the year was approximately 450 million pallets. Each firm produced an average of 193,000 pallets in 1985. Thirty-nine percent of the pallet firms also produced wood containers, averaging 1,300 units annually.

**The Army "Steels" In**

In recent years, makers of plastic and steel pallets have attempted to gain a larger share of the pallet market. These substitute

Table I:
Wood Pallet Firms are located in every region of the U.S.

REGIONAL DISTRIBUTION OF THE WOOD PALLET INDUSTRY, 1985

| Region | Number of Firms | Annual Production/ Firm | Daily Production/ Firm | Board Feet/ Pallet | Number Employees/ Firm | % Expendable Pallets/ Firm |
|---|---|---|---|---|---|---|
| | | Average | | | | |
| Pacific | 179 | 511,000 | 1,777 | 21.9 | 34 | 43 |
| Mountain | 52 | 173,000 | 695 | 22.8 | 21 | 31 |
| West North Central | 181 | 168,000 | 720 | 19.1 | 18 | 45 |
| West South Central | 176 | 280,000 | 1,272 | 18.4 | 32 | 56 |
| East North Central | 702 | 148,000 | 685 | 15.5 | 17 | 58 |
| East South Central | 267 | 176,000 | 747 | 17.3 | 20 | 64 |
| New England | 156 | 125,000 | 502 | 15.9 | 10 | 59 |
| Middle Atlantic | 294 | 169,000 | 619 | 16.8 | 13 | 53 |
| South Atlantic | 333 | 196,000 | 902 | 19.4 | 24 | 46 |
| United States | 2,340 | 193,000 | 835 | 17.7 | 19 | 52 |

Source: Department of Forestry, Southern Illinois University

materials have met with some limited acceptance, but the market has proven wood to be the material of choice. However, a recent decision by the United States Army selecting steel pallets has raised substantial concern among wood pallet and container producers. The military is a significant user of wood pallets for military wares, ordinances and myriad other shipping and warehousing purposes. The Army recently issued a new specification requiring steel pallets for one of its new weapon systems. The new specification applies to the packaging of 120mm tank shells. While only affecting these supplies, it appears that the Army has further plans to switch from wood pallets. The Army has scheduled 1988 purchases of steel and plastic containers for 155mm artillery shells. It has also started to test prototypes and is considering specifications for steel pallets to be used in other systems and for other purposes.

The impact on the wood pallet and container industry is difficult to assess given the decentralized and local characteristics of the industry and military procurement processes. However, industry sources put the military percentage of the total market at 3-4 percent. Accurate figures on the number of pallets and containers that the military purchases are hard to come by because these products are often procured through secondary contractors; that is, the Army buys the weapon and packaging as one unit from the weapon manufacturer so that the latter is the primary buyer of the pallet and/or container, not the Army. But, ultimately it is the Army which supplies the specifications that the pallets and containers must meet.

The Army's major concern over wood pallets and containers is that they do not meet the Nuclear, Biological and Chemical (NBC) decontamination requirements of modern warfare. Proponents of the metal pallets and containers argue that in the event of a nuclear war, metal could be decontaminated whereas wood could not. (One wonders if decontamination of pallets is going to be near the top of the list of priorities in such a disastrous event.) Nevertheless, the wood pallet and container industry is organizing a product development effort in conjunction with the Forest Products Laboratory in Madison, Wisconsin to develop a coating or sealant for wood that would enable it to meet the NBC requirements.

In addition, a study is currently being undertaken by the National Wood Pallet and Container Association to better estimate the size of the military market. It is currently estimated that the dollar value of that business amounts to $50 million per year. Additional sales are made to other suppliers or shippers with military contracts. In the aggregate, it is estimated that the impact of changes in military specifications for pallets and wood packaging could mean the loss of $110 million per year, affecting dozens of firms and employees. This does not take into account the effect on hardwood lumber producers who sell low grade lumber to the pallet manufacturers.

The real importance of these developments is the carry over to other industrial sectors. The food processing, paper, auto and auto parts, and many other industries will be watching closely to see how successfully wood pallet and container producers can maintain the military market. Producers in the industry believe that their product offers considerable flexibility and low cost over substitutes.